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PRE-SERVICE AND IN-SERVICE TRAINING, INDIGENOUS KNOWLEDGE AND FOUNDATION PHASE TEACHERS' EXPERIENCES IN THE SOUTH AFRICAN CLASSROOM

Abstract

The National Curriculum Statement for Grades R-9 (NCS) (Department of Education, 2002) asks that Indigenous Knowledge Systems (IKS) be valued in South African schools and classrooms. Teachers are urged to use context-specific and context-relevant forms of IK to teach content; and to incorporate IK methodologies into their teaching methods. Little formal guidance has thus far been offered to teachers on best practices in this regard. Nevertheless, teachers have been innovating and adapting to their classrooms and contexts and using IKS in their classrooms. The discussion in this paper is based on interviews and group discussions with foundation phase (FP) teachers in the Nciba district in Cofimvaba in the Eastern Cape Province in South Africa as well as key informant interviews with two FP teachers in KwaZulu-Natal. In the first section of the paper, we outline the evolution of the curriculum in South Africa post 1994. We then examine the role played by IKS in the South African context. In the second section we critically discuss pre- and in-service teacher training in South Africa particularly in relation to the use of IKS in the classroom. The third section is a presentation of data collected during interviews and group discussions with FP teachers in Cofimvaba regarding the teaching of mathematics. We conclude by reflecting on the relationship between curriculum-reform, teacher training and the lived experiences of foundation phase teachers in Cofimvaba.

Introduction

South African school curriculum has undergone several revisions since 1994 when South Africa's first democratic elections marked the official end of the apartheid era and its education policies. These curriculum changes have had a significant impact on pre- and in-service teacher training impacting significantly on teacher-preparedness. Currently school learners in South Africa learn in the context of the National Curriculum Statement (NCS) for Grades R to 9. The NCS prescribes what learners should know and be able to do, while the Assessment Standards for each grade describe the minimum level, depth, and breadth of what should be learned in each learning area (Gardiner, 2008). The NCS has been designed this way to ensure that it is flexible and has the ability to be adapted to local conditions and needs. The Department of Basic Education (DBE) expects this curriculum to be interpreted and implemented differently in diverse contexts. Although this is the case, schools in so-called 'rural' areas are still unable to take advantage of the opportunities created by the NCS due to the limited resources available to them. Given South Africa's political past the terms rural and urban have a complicated history. In this paper the term 'rural' is taken to mean a geographic area that is

located outside a city or town, while the term 'urban' denotes a geographical area constituting a city or town.

This paper draws on data collected during interviews and group discussions with FP teachers in Cofimvaba focusing particularly on the teaching of mathematics. The data forms part of the data collection process for a three-year long study, funded by the National Research Foundation (NRF) that aims to develop teaching and learning tools in collaboration with local teachers and community members to be used in seven rural schools. This study is located in Cofimvaba in the Eastern Cape Province. The Eastern Cape, and Cofimvaba in particular, is predominantly rural and is characterized by high levels of poverty and unemployment. Furthermore, the Eastern Cape was the province with the poorest performance in the 2012 final senior secondary results with the five poorest performing districts all being in the Eastern Cape.

The Curriculum and Policy Context with Specific Reference to the Foundation Phase

South African Curriculum reform post 1994 has been turbulent. The government introduced Curriculum 2005 (C2005) in 1998 in an attempt to provide a common, unifying curriculum for all South African learners. The education system had previously been divided along racial and geographical lines determined by the apartheid government's education policy which resulted in discrepancies in the quality and depth of education (Moodley, 2012). Between 1998 and 2000, teachers reported experiencing problems implementing Outcomes Based Education (OBE) and C2005 (Mokhele, 2012). A review committee on C2005 commissioned by then Minister of Education, Kader Asmal, found that there was a lack of clarity in policy documents and difficulties were experienced with the implementation of C2005. As a result of the recommendations of the committee to phase out C2005 replacing it with a strengthened and streamlined curriculum the NCS was launched in April 2002. There continued to be a deterioration in learner performances, however, and in 2009 a Ministerial task team report cited issues such as teacher training, lack of proper or insufficient infrastructure, lack of Learning and Teaching Support Materials (LTSMs) among others, as challenges within the system which resulted in the curriculum being impossible to deliver. As a result of the findings of the task team, the Curriculum Assessment Policy Statement (CAPS) was developed and implemented for the first time in 2012. CAPS do not replace the NCS, but give clear guidelines as to what content has to be taught in a particular grade or subject.

The content of the curriculum, i.e. the knowledge, concepts and skills that need to be taught and learned in each subject, term, and grade is set out in the CAPS. The compulsory subjects during the FP (Grades R to 3, children aged 5 to 9) vary slightly. Grade R learners study one official language at home language level, mathematics, and life skills comprising beginning knowledge, creative arts, physical education, and personal and social wellbeing. A second home language, at first additional language level becomes a requirement in Grades 1 to 3.

FP teachers across South Africa received CAPS Training in 2011 to prepare them for implementation in 2012. The training was run by facilitators from the DBE using a standardised facilitator's manual provided by the DBE. Teachers all received

participant manuals provided by the DBE. Training was also provided to Principals and School Management Teams.

The role of Indigenous Knowledge Systems in the Foundation Phase in South Africa

The CAPS documents for each of the four subjects taught in the Foundation Phase all state the importance of “[v]aluing indigenous knowledge systems” (DOE, CAPS documents for Home language, first additional language, mathematics and life skills: 3). Other than this sentence IKS is not mentioned in the CAPS document for mathematics. Teachers indicated that while they are not ‘required’ to incorporate IKS into their teaching, they have (a) been doing so for some time in an effort to make content more understandable and context-relevant; and (b) feel urged to do so. Given that the teachers, particularly those in rural and under-resourced settings, feel the need to use IKS to make content more relevant, feel urged to do so, and have been doing so, there seems to be a gap in the CAPS documents for FP in terms of offering good practices for the incorporation of IKS into content-teaching (DOE, 2011).

Pre-Service and In-service Training for Foundation Phase Teachers

In the context of these rapid and often substantial changes to the curriculum in South Africa, teacher training both pre- and in-service has been affected. Rural and under-resourced schools have been particularly hard-hit by the myriad changes in the curriculum and the changing requirements in terms of the knowledge, concepts and skills that need to be taught. Both national and international literature and research studies (e.g. Lewin, 2004; Kruss, 2008) concur that teachers are the most important resource in schools in any drive geared towards raising education standards. Diko and Meyiwa (2012: 1) point out that “South Africa’s Department of Education... acknowledging the vital role of teachers, has over the years, established a suite of policies, curriculum and structural changes in an effort to produce more as well as... better-skilled and capable teachers”. It is clear that the manner in which the education system of a country carries out the professional development of its teachers, both pre-service and in-service is crucial. In South Africa, in rural areas in particular, classroom and context-bound realities require attention. Letsekha, Wiebesiek-Pienaar and Meyiwa (2013) argue that integrating IKS within South Africa’s schooling system will contribute to providing context-relevant education that is accessible to learners and their care-givers in rural and under-resourced settings.

Teacher Preparedness for teaching in a rural context

The DBE’s Integrated Strategic Planning Framework makes minimal reference to teaching in a rural context. This is an additional need involving in-service teachers’ professional development, in order to ensure “sustainable development education” (Vargas, 2000). Findings from the project cited above reveal that it is essential that teacher training, whether pre-service or in-service takes cognizance of both the content and context in which the actual teaching will be or is carried out.

To gain insights into how the teachers in our research site are prepared for teaching in a rural, under-resourced setting, we posed the following questions related to their preparedness as well as the manner in which they carried out the task:

1. What exposure, either through course content at college, have they had in order to prepare them to teach in a rural context?
2. How well prepared were they for the realities that they have experienced at their school and/or in their area?

It was apparent in the responses to these questions that there is a lack of bold initiative and sustained support to address issues around teaching in a rural context and best practices related to the use and/or inclusion of IKS in pre-service training and in-service development programmes.

Beyond the Teacher Certification Programme

Vargas (2000) argues that a culture-sensitive regard and plan for including local data into a school system affirms the value of traditional or IK to complement modern knowledge. Further, Vargas (2000: 378) suggests that educating for a sustainable future requires inclusion of six features: “an interdisciplinary approach; teacher-training, pre- and in-service; curricula based on the three pillars of sustainable development; social and environmental justice; meaningful political participation; and respect for local and indigenous cultures”.

Some teachers referred to the actual teaching in the classroom as a learning experience. A 58-year-old grade two teacher shared that “development and growing is for everyone irrespective of age and qualification hence in my entire junior primary school teaching career I have always been eager to learn new things”. A number of other teachers concurred with this statement. What seems to happen at school-level is that in-service teacher development rarely happens for every teacher at a school. The tendency is to get a representative to attend training who is then expected to impart new knowledge gained to the other teachers in the FP. This approach, though obviously more efficient in terms of time, is perhaps not the most effective. This method of dissemination of information for CPD is one frequently used in rural and under-resourced schools given that teachers often teach in multi-grade classrooms, and schools are often under-staffed.

Putting Policy into Practice: Integrating Indigenous Knowledges into Foundation Phase Mathematics

Developing mathematical skills in the FP requires teachers to teach a variety of essential skills, including counting, calculating, reasoning, estimation, investigating, interpretation, describing, analysing. The CAPS for FP mathematics provides teachers with a list of recommended resources to assist in teaching the above-mentioned skills. CAPS stresses that it is important for the FP teacher to allow children to have access to concrete teaching and learning aids, such as number blocks, counting frames, etc. that learners can operate as they practice. While CAPS provides a list of recommended resources, the DBE does not provide actual resources. In rural and under-resourced settings, such as Cofimvaba, the value of these suggestions is thus limited.

Due to the lack of access to recommended resources teachers modify teaching materials and strategies, making them more personally relevant to students. Although lesson plans follow the standard set by CAPS and the RNCS, teachers find ways to recognise and reinforce the culture of the students. The most innovative way teachers achieve this is by recognising IK embedded in prior and experiential knowledge that learners bring with them to the classroom, gained from living in

Cofimvaba. Indigenous knowledge can act as a powerful tool in the classroom, as it helps students build on their communities' knowledge and recognises students' culture and value systems.

The teachers that participated in our study state that learners are much more likely to retain information when they can find personal relevance in the material that they are learning. They argue that children are curious by nature and must be given the freedom to explore and discover, and be allowed to discuss what they see at home or in their communities. To enable this, storytelling is a major part of teaching in foundation phase mathematics. Children may be asked to tell their favourite folk tale or to tell stories about events that took place at home.

The teachers maintain that children learn more effectively when words, visual images and auditory input are combined; therefore much of the teaching and learning at foundation phase focuses on visual and auditory perception, which is the use of eyes and ears in learning. To achieve this teachers rely on materials collected by learners from home and around the community. For the foundation phase teacher creativity is vital, and this often requires that everyday household items that might otherwise be discarded can be recycled into useful teaching and learning materials. Through collecting simple items such as tree branches, leaves, match sticks and cold drink cans learners are also taught data handling which focuses on

- Collecting data to answer questions;
- Sorting the data while giving reasons;
- Grouping objects and, explaining reasons for grouping.

The teachers recognise that the simple games played by children at home and in the community are essentially mathematical in nature. Incorporating such games ensures that the foundation phase learner experiences mathematical challenges as fulfilling and enjoyable. Incorporating such games also goes a long way to making mathematics an empowering, enjoyable, fun and challenging experience.

The schools in Cofimvaba have multilingual mathematics programmes. Mathematics is taught using the home language of the learners alongside the language of teaching and learning, which is English. This ensures that learners have the ability to read and understand the use of their indigenous language as a tool for learning. Incorporating indigenous knowledge and languages into everyday teaching practices also gives parents and other caregivers the invaluable opportunity to support their children in an informal and supportive environment.

The examples provided by Cofimvaba teachers of how they use various forms of IK and context-relevant materials to teach content illustrate the value of the use of IK in the classroom, and the importance of teaching methods and approaches being context-specific. The approaches that these teachers used are not necessarily covered in pre-service teacher training, nor do the teachers report them being covered in in-service training. They seem to adopt a 'make the best of what you've got' attitude towards the lack of resources, less than ideal teaching and learning circumstances and a lack of support from key policy documents and teacher-training.

Conclusion

We conclude from our discussions with FP mathematics teachers in Cofimvaba that in keeping with the RNCS and CAPS, they are valuing IKS in their classrooms with little or no guidance provided by those policy documents or the pre- or in-

service teacher-training that they receive. While the RNCS and CAPS urge teachers to value IKS in the classroom and the school, pre- and in-service teacher training and the policy documents do not recognise the unique needs of teachers and learners in rural and under-resourced settings for greater guidance and support that is context-relevant.

In closing, we argue that the findings of the study upon which this paper is based, indicate that more research is required within the Foundation Phase in order to generate evidence-based data on what we need to know and what needs to be done to adequately prepare teachers, and provide relevant support, such that all schools in South Africa are staffed by knowledgeable, well-skilled, culturally-sensitive, confident and highly effective practitioners within the context in which their classrooms are found.

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